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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/903,024	07/11/2001	James Morgan Murphy	SEA9783/30874.108USU1	9848
23552	7590	02/25/2004	EXAMINER	
MERCHANT & GOULD PC P.O. BOX 2903 MINNEAPOLIS, MN 55402-0903			MAGEE, CHRISTOPHER R	
			ART UNIT	PAPER NUMBER
			2653	11

DATE MAILED: 02/25/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/903,024

Applicant(s)

MURPHY, JAMES MORGAN

Examiner

Christopher R. Magee

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 January 2004 and 19 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 and 9-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 21, 26 and 27 is/are allowed.
- 6) ☒ Claim(s) 1-4, 6, 10, 12-14, 17, 19, 20 and 22-24 is/are rejected.
- 7) ☒ Claim(s) 7, 9, 11, 15, 16, 18 and 25 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 1/7/2004 has been entered.

Response to Amendment

The reply filed 1/7/2004 and the supplemental amendment, filed 2/19/2004, was applied to the following effect:

Drawings

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description: In Figure 8, reference number "360". A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

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Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims ¹⁻⁶~~5-6~~ 10, 12-14, 17, 19, 20 and 22-24 are rejected under 35 U.S.C. 102(e) as being anticipated by Berding et al. (hereinafter Berding) (US 6,307,715 B1).

3. Regarding claim 1, Berding shows a disc drive head positioning suspension comprising:

a base 69;

a load beam 68, having a first end and a second end, a longitudinal axis extending between the first end and the second end of the load beam 6, and a transverse axis extending perpendicular to the longitudinal axis within the first plane; and

a bend section (not numbered) extending in a first plane and connecting the base 69 to the second end of the load beam 68 to define a load path for transmission of forces between the base and the load beam, the bend section including a transverse axis aligned parallel to the transverse axis of the load beam, and a longitudinal axis aligned parallel to the load beam longitudinal axis.

a width measured along the transverse axis of the bend section between first and second sides of the bend section, and first and second rails formed from material of the bend section and extending in a direction parallel to the transverse axis of the bend section, the first and second rails being bent out of the first plane so as to form an open channel being positioned in the load

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path such that the forces transmitted between the base and load beam pass through the open channel (attached Fig. 3 and 4).

4. Regarding claim 2, Berding shows the first and second rails extend in second and third planes distinct from the first plane (Fig. 4).

5. Regarding claim 3, Berding shows each of the first and second rails has a width, a thickness, and a length, and wherein the width of the first and second rails is substantially similar to the width of the base 69 (Fig. 3 and 4).

6. Regarding claim 4, Berding shows the first and second rails extend in a direction substantially normal to the first plane (Fig. 4).

7. Regarding claim 6, Berding shows the cross section of the open channel is substantially U-shaped (Fig. 4).

8. Regarding claim 10, Berding shows a portion of the bend section and the first and second rails being removed on one side of the longitudinal axis (Fig. 3 and 4).

9. Regarding claim 12, Berding shows the load beam having a width centered about the longitudinal axis, and wherein the width of the first and second rails is less than the width of the load beam (Fig. 3 and 4).

10. Regarding claim 13, Murakami shows suspension member 6 comprising:

a plate (not numbered) extending in a first plane, the plate having a width centered about a longitudinal axis of the plate; and

first and second rails formed from material of the plate and each having a width extending in a direction transverse to the longitudinal axis of the plate, the first and second rails being bent out of the first plane and being spaced apart in the longitudinal direction, the first rail

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having a length extending in a second plane and the second rail having a length extending in a third plane, the second and third planes being different than the first plane,

wherein a portion of the plate extending in the first plane connects the first and second rails together to form an open channel having a generally U-shaped cross section, a portion of the first and second rails extending across substantially all of the bend section width.(Fig. 3 and 4).

11. Regarding claim 14, Berding shows the second and third planes are perpendicular to the first plane (Fig. 4).

12. Regarding claim 17, Berding shows the second and third planes extend at different angles from the first plane (Fig. 4).

13. Regarding claim 19, Berding shows a head suspension comprising:

a base 69;

a load beam 68; and

a bend section (not numbered) including a base plate having a first end and a second end, the first end being coupled (i.e., such as something that unites or connects two things together: to unite chemically) to the load beam and the second end being coupled to the base;

a base plate extending in a first plane, and a rail coupled to the plate, the rail having a width, a length, and a thickness and extending in a second plane, the first plane being different from the second, the rail width being defined across the bend section in direction transverse to a longitudinal axis of the head suspension, whereby the base of the load beam is coupled to the bend section along the width of the rail (Fig. 3 and 4).

- Regarding claim 20, Berding shows a suspension member 11 comprising:

a base 69:

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a load beam 68; and

the stiffening means extending in a first plane and coupling (i.e., such as something that unites or connects two things together: to unite chemically) the base and load beam for maximizing translational stiffness of the load beam in a direction out the first plane while minimizing rotational stiffness of the load beam, the stiffening means including first and second rails each having a width extending in a direction transverse to a longitudinal axis of the suspension member, a length extending in a direction out of the first plane, and a thickness, the first and second rails being spaced apart along the longitudinal axis and being connected by a portion of the stiffening means that extends in the first plane so as to form an open channel;

whereby the base or the load beam is coupled to the stiffening means along the width of the first or second rail (Fig. 3 and 4).

14. Regarding claims 22-24, Berding discloses a head suspension comprising:

a base 69;

a load beam 68; and

a bend section (not numbered), each aligned along a longitudinal axis of the head suspension, the bend section extending in first plane and connecting the base and load beam to define a load path for transmission of forces between the base and the load beam, the bend section including a width extending transverse to the longitudinal axis, and first and second rails formed from material of the bend section, the first and second being bent out of the first plane so as to form an open channel (Fig. 4) that extends across at least a portion of the bend section width, the open channel being positioned in the load beam path and wherein the open channel and the first and second rails are arranged and configured to minimize torsional compliance of

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the head suspension about the longitudinal axis while minimizing changes in torsional compliance of the head compliance of the head suspension about a transverse axis located in the first plane and lying generally perpendicular to the longitudinal axis (col. 1, lines 65-67; col. 4, line 64 to col. 5, line 5).

Response to Arguments

Applicant's arguments with respect to claims 1, 13, 19 and 20 have been considered but are moot in view of the new ground(s) of rejection.

Moreover, the Applicant first asserts on page 8 of the filed response dated 1/7/2004:

"Berding fails to disclose an open channel being positioned in the load path such that forces transmitted between the base and the load beam pass through the open channel as required by claim 1."

"Berding also fails to disclose a portion of the first and second rails extending across substantially all of the bend section width as required by claim 13."

"Berding fails to disclose that the base or the load beam is coupled to the bend section along the width of the rail as required by claim 19 or that the base or the load beam is coupled to the stiffening means along the width of the first or second rail, as required by claim 20 because a load beam or base plate coupled to the hinge region 80 of Berding would also be coupled to the uncut regions 82, 84 outside the width of flaps 88,90."

In response to applicant's argument mentioned above, a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963). In this case, the structure of Berding is similar to the claimed invention as shown in Figures 3 and 4.

Allowable Subject Matter

15. Claims 7, 9, 11, 15, 16, 18 and 25 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

16. Claims 21, 26 and 27 are allowed.

The following is an examiner's statement of reasons for allowance:

- **Claim 21** specifies a head suspension which requires:

"the rail includes at least two separate segments along the rail width."

Hanrahan '252 shows a rail 66 that extends along a transverse axis, which is perpendicular to a longitudinal axis of the beam. Hanrahan does not teach or suggest separating the rail into at least two separate segments as claimed in the present invention.

Allen '381 exhibits a bend section 137 comprises first 343 and second 344 rails being separated in the longitudinal axis direction of the bend section 137, the rails forming an open channel (Figure 9). Neither rails 343 or 344 are split into two distinct segments.

Last, Murakami '044 shows a one-piece rail (not numbered) that extends the transverse axis that is perpendicular to the beam longitudinal axis. Murakami does not teach or suggest separating the rail into at least two separate segments as claimed in the present invention.

Therefore, these features, in combination with other features of claim 21, are not anticipated by, nor made obvious over, the closest prior art of record of Hanrahan (US 5,870,252), Allen et al. (US 5,894,381) and/or Murakami et al. (US 6,212,044 B1).

- **Claim 26** specifies a suspension member bend section which requires:

"whereby the plate is configured for mounting to the load beam or the suspension member within the width of the rail.."

Murakami '044 shows a one-piece rail (not numbered) that extends the transverse axis that is perpendicular to the beam longitudinal axis. Murakami does not teach or suggest separating the rail into at least two separate segments as claimed in the present invention.

Berding et al. (US 6,307,715 B1) disclose a hinge region 80 having a torsional stiffening brace 92 as shown in Figure 4. The flaps 88, 90 are formed from the bend section material. Berding '715 teaches the load forces applied at one side of the hinge region circumvent the stiff brace 92 by traveling along the uncut regions 82, 84. Berding '715 does not teach or suggest a plate being configured for mounting to the load beam or the suspension member within the width of the rail as claimed in the present invention.

Therefore, these features, in combination with other features of claim 26, are not anticipated by, nor made obvious over, the closest prior art of record of Murakami et al. (US 6,212,044 B1) and/or Berding et al. (US 6,307,715 B1).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

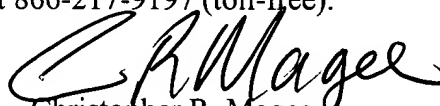
- Onodera et al. (US 4,884,154) is cited to show a flanged transducer-supporting arm for a magnetic head/arm assembly.
- Sakurai (US 5,126,904) is cited to show a magnetic head supporting structure with thick and thin portions for an information recording apparatus.

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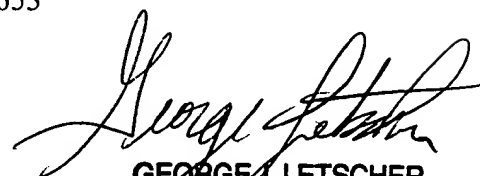
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher R. Magee whose telephone number is (703) 605-4256. The examiner can normally be reached on M-F, 8: 00 am-5: 30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Korzuch can be reached on (703) 305-6137. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Christopher R. Magee
Patent Examiner
Art Unit 2653

February 20, 2004


GEORGE J. LETSCHER
PRIMARY EXAMINER